

wherein:

D4
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R_1, R_2, R_3, R_4 and R_6 , which are the same or different, are chosen from the group consisting of: H, C_{1-8} alkyl, C_{2-8} alkenyl, C_{2-8} alkynyl, cyclopropane, cyclobutane, cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane, canphane, adamantane, phenyl, biphenyl, naphthyl, saturated or aromatic heterocycle containing one to three N atoms, halogen, CN, azide, NRR' , C_{1-8} alkylamino, arylamino, C_{1-8} alkyloxy, aryloxy, COOR, CONRR', $C(=O)R$, wherein R and R', which are the same or different, are chosen from the group consisting of H, C_{1-8} alkyl, cyclopropane, cyclobutane, cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane, canphane, adamantane, phenyl, biphenyl, naphthyl, saturated or aromatic heterocycle containing one to three N atoms or naphthyl- C_{1-8} ;

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E1
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R_5 is chosen from the group consisting of: H, C_{1-8} alkyl, C_{1-8} alkyl-phenyl, biphenyl, naphthyl, COOR, CN, phenyl, saturated or aromatic heterocycle containing one to three N atoms, C_{1-8} alkyl-saturated or aromatic heterocycle containing one to three N atoms; C_{1-8} alkyl saturated or aromatic heterocycle containing one to three N atoms-ribose phosphate;

X is chosen from the group consisting of: O, $C(=O)R$, COOR, NO_2 , and CONNR', wherein R and R' are as above defined;

Q is chosen from the group consisting of single-bond, C_{1-8} alkyl, C_{2-8} alkenyl, C_{2-8} alkynyl, cyclopropane, cyclobutane, cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane, canphane, adamantane, CO, CONR, and NR, where R is as above defined;

W is chosen from the group consisting of H, C_{1-8} alkyl, C_{2-8} alkenyl, C_{2-8} alkynyl, cyclopropane, cyclobutane, cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane, canphane, adamantane, trifluoromethyl, C_{1-8} alkoxy, C_{1-8} alkoxy- C_{1-8} alkyl, phenyl, biphenyl, naphthyl- C_{1-8} alkyl, phenyl, biphenyl, naphthyl, phenyloxy, biphenyloxy, naphthyloxy, phenylamino, biphenylamino, naphthylamino, C_{1-8} alkyl-carbonyl, phenylcarbonyl, biphenylcarbonyl, naphthylcarbonyl, phenylcarboxyl, biphenylcarboxyl, naphthylcarboxyl, phenylcarboxamide, biphenylcarboxamide, naphthylcarboxamide, halogen, CN, NRR' ,

D4
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C₁₋₈ alkylamino, saturated or aromatic heterocycle containing one to three N atoms wherein the groups alkyl, alkenyl, alkynyl, cyclopropane, cyclobutane, cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane, canphane, adamantane, phenyl, biphenyl, naphthyl, saturated or aromatic heterocycle containing one to three N atoms, can be substituted;

n is an integer comprised between 1 and 4;

the symbol ----- means that the corresponding bonds a, b, c, d, e, f, g, h and i are single or double bonds, with the proviso that when b or f are a double bond, the group R₅ is absent; their pharmaceutically acceptable salts and esters.

Sub E1
Cont

2. (twice amended) A benzo(c)quinolizine compound of formula (1) according to Claim 1, wherein R₅ = H, C₁₋₈ alkyl-phenyl, biphenyl, naphthyl, saturated or aromatic heterocycle containing one to three N atoms, C₁₋₈ alkyl-saturated or aromatic heterocycle containing one to three N atoms; or a C₁₋₈ alkyl-saturated or aromatic heterocycle containing one to three N atoms-ribose-phosphate;

X = O, COOH;

Q = single bond, CO, CONR, NR, wherein R

is chosen from the group consisting of H, C₁₋₈ alkyl, cyclopropane, cyclobutane, cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane, canphane, adamantane, phenyl, biphenyl, naphthyl, saturated or aromatic heterocycle containing one to three N atoms, naphthyl-C₁₋₈alkyl;

W = H, F, Cl, Br, Me, t-butyl, C₁₋₈alkoxy, 2,5-dimethylhexyl, trifluoromethyl, 2,5-(di-trifluoromethyl)-phenyl, 4-methyloxy-phenyl, phenyl, phenyl-C₁₋₈alkyl, C₁₋₈alkylcarbonyl, phenylcarbonyl;

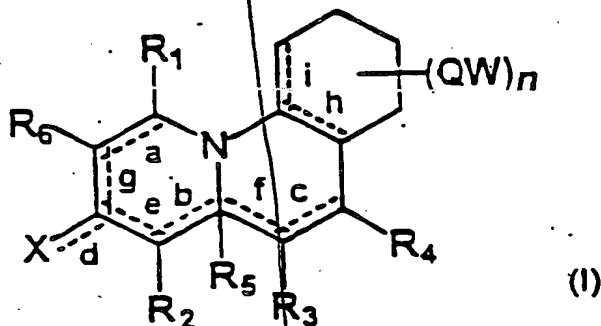
n = 1 and 2;

R₁, R₂, R₃, R₄ and R₆ = H, Me, CN, phenyl, COOR, CONRR', C(=O)R, wherein R and R' are the same or different and are chosen from the group consisting of H, C₁₋₈ alkyl, cyclopropane, cyclobutane, cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane, canphane, adamantane, phenyl, biphenyl, naphthyl, saturated or unsaturated heterocycle containing one to three N atoms,

D 1
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naphthyl-C₁₋₈.

D 2
10. (amended) A pharmaceutical composition wherein the active principle is a compound of formula (I) according to Claim 1 or mixtures thereof in combination with suitable pharmaceutically acceptable excipients.

D 3
28. (amended) A fully and partially reduced benzo(c)quinolizine compound of formula (I):



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E 2
cont
wherein:

R₁, R₂, R₃, R₄ and R₆, which are the same or different, are chosen from the group consisting of: H, C₁₋₈ alkyl, C₂₋₈ alkenyl, C₂₋₈ alkynyl, cyclopropane, cyclobutane, cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane, camphane, adamantane, phenyl, biphenyl, naphthyl, saturated or unsaturated aromatic heterocycle containing one N atom, halogen, CN, azide, NRR', C₁₋₈ alkylamino, arylamino, C₁₋₈ alkyloxy, aryloxy, COOR, CONRR', C(=O)R, wherein R and R', which are the same or different, are chosen from the group consisting of H, C₁₋₈ alkyl, cyclopropane, cyclobutane, cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane, camphane, adamantane, phenyl, biphenyl, naphthyl, saturated or unsaturated heterocycle containing one N atom, naphthyl-C₁₋₈;

R₅ is chosen from the group consisting of: H, C₁₋₈ alkyl, C₁₋₈alkyl-phenyl, biphenyl, naphthyl, COOR, CN, phenyl, saturated or aromatic heterocycle containing one N atom, C₁₋₈ alkyl-saturated or aromatic heterocycle containing one N atom; C₁₋₈

alkyl saturated or aromatic heterocycle containing one N atom-
ribose phosphate;

X is chosen from the group consisting of: O, C(=O)R, COOR, NO₂,
and CONNR', wherein R and R' are as above defined;

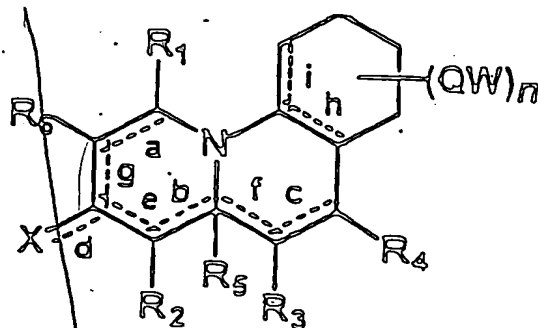
Q is chosen from the group consisting of single-bond, C₁₋₈ alkyl,
C₂₋₈ alkenyl, C₂₋₈ alkynyl, cyclopropane, cyclobutane,
cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane,
camphane, adamantane, CO, CONR, and NR, where R is as above
defined;

W is chosen from the group consisting of H, C₁₋₈ alkyl, C₂₋₈
alkenyl, C₂₋₈ alkynyl, cyclopropane, cyclobutane, cyclopentane,
cyclohexane, cycloheptane, cyclooctane, norbornane, camphane,
adamantane, trifluoromethyl, C₁₋₈ alkoxy, C₁₋₈ alkoxy-C₁₋₈ alkyl,
phenyl, biphenyl, naphthyl-C₁₋₈ alkyl, phenyl, biphenyl, naphthyl,
phenyloxy, biphenyloxy, naphthyloxy, phenylamino, biphenylamino,
naphthylamino, C₁₋₈ alkyl-carbonyl, phenylcarbonyl,
biphenylcarbonyl, naphthylcarbonyl, phenylcarboxyl,
biphenylcarboxyl, naphthylcarboxyl, phenylcarboxamide,
biphenylcarboxamide, naphthylcarboxamide, halogen, CN, NRR',
C₁₋₈ alkylamino, saturated or aromatic heterocycle containing one
N atom wherein the groups alkyl, alkenyl, alkynyl, cyclopropane,
cyclobutane, cyclopentane, cyclohexane, cycloheptane,
cyclooctane, norbornane, camphane, adamantane, phenyl, biphenyl,
naphthyl, saturated or aromatic heterocycle containing one N
atom, can be substituted;

n is an integer comprised between 1 and 4;

the symbol ----- means that the corresponding bonds a, b, c, d,
e, f, g, h and i are single or double bonds, with the proviso
that when b or f are a double bond, the group R₅ is absent; their
pharmaceutically acceptable salts and esters.

29. (new) A fully and partially reduced benzo(c)quinolizine
compound of formula (1):



wherein:

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R_1 , R_2 , R_3 , R_4 and R_6 , which are the same or different, are chosen from the group consisting of: H, C_{1-8} alkyl, C_{2-8} alkenyl, C_{2-8} alkynyl, cyclopropane, cyclobutane, cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane, camphane, adamantane, phenyl, biphenyl, naphthyl, saturated or unsaturated aromatic heterocycle containing one N atom, halogen, CN, azide, NRR' , C_{1-8} alkylamino, arylamino, C_{1-8} alkyloxy, aryloxy, $COOR$, $CONRR'$, $C(=O)R$, wherein R and R' , which are the same or different, are chosen from the group consisting of H, C_{1-8} alkyl, cyclopropane, cyclobutane, cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane, camphane, adamantane, phenyl, biphenyl, naphthyl, saturated or unsaturated heterocycle selected from the group consisting of pyridyl, imidazolyl, pyrrolyl, indolyl, triazolyl, pyrrolidinyl and piperidinyl, naphthyl- C_{1-8} ;

R_5 is chosen from the group consisting of: H, C_{1-8} alkyl, C_{1-8} alkyl-phenyl, biphenyl, naphthyl, $COOR$, CN, phenyl, saturated or aromatic heterocycle selected from the group consisting of pyridyl, imidazolyl, pyrrolyl, indolyl, triazolyl, pyrrolidinyl and piperidinyl, C_{1-8} alkyl-saturated or aromatic heterocycle selected from the group consisting of pyridyl, imidazolyl, pyrrolyl, indolyl, triazolyl, pyrrolidinyl and piperidinyl; C_{1-8} alkyl saturated or aromatic heterocycle selected from the group consisting of pyridyl, imidazolyl, pyrrolyl, indolyl, triazolyl, pyrrolidinyl and piperidinyl-ribose phosphate;

X is chosen from the group consisting of: O, $C(=O)R$, $COOR$, NO_2 , and $CONNR'$, wherein R and R' are as above defined;

Q is chosen from the group consisting of single-bond, C_{1-8} alkyl, C_{2-8} alkenyl, C_{2-8} alkynyl, cyclopropane, cyclobutane, cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane, camphane, adamantane, CO, $CONR$, and NR , where R is as above defined;

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W is chosen from the group consisting of H, C₁₋₈ alkyl, C₂₋₈ alkenyl, C₂₋₈ alkynyl, cyclopropane, cyclobutane, cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane, camphane, adamantane, trifluoromethyl, C₁₋₈ alkoxy, C₁₋₈ alkoxy-C₁₋₈ alkyl, phenyl, biphenyl, naphthyl-C₁₋₈ alkyl, phenyl, biphenyl, naphthyl, phenyloxy, biphenyloxy, naphthyloxy, phenylamino, biphenylamino, naphthylamino, C₁₋₈ alkyl-carbonyl, phenylcarbonyl, biphenylcarbonyl, naphthylcarbonyl, phenylcarboxyl, biphenylcarboxyl, naphthylcarboxyl, phenylcarboxamide, biphenylcarboxamide, naphthylcarboxamide, halogen, CN, NRR', C₁₋₈ alkylamino, saturated or aromatic heterocycle selected from the group consisting of pyridyl, imidazolyl, pyrrolyl, indolyl, triazolyl, pyrrolidinyl and piperidinyl wherein the groups alkyl, alkenyl, alkynyl, cyclopropane, cyclobutane, cyclopentane, cyclohexane, cycloheptane, cyclooctane, norbornane, camphane, adamantane, phenyl, biphenyl, naphthyl, saturated or aromatic heterocycle containing one N atom, can be substituted; n is an integer comprised between 1 and 4; the symbol ----- means that the corresponding bonds a, b, c, d, e, f, g, h and i are single or double bonds, with the proviso that when b or f are a double bond, the group R₅ is absent; their pharmaceutically acceptable salts and esters.

REMARKS

In the Office Action, the rejections under 35 U.S.C. §102(b) of claims 1 and 10-12 were withdrawn. The rejection of claims 11-12 under 35 U.S.C. §112, second paragraph were withdrawn.

Claims 1, 2 and 10 were rejected under 35 U.S.C. §112, first paragraph for reasons of record as set forth in Paper No. 10.

Reconsideration is requested.

This rejection was based on the contention that the term "one or more N in a ring" read on non-existent and non-enabled species. By this Amendment, the applicants have revised the text of the claims from "one or more N in a ring" to --one